

CLAIMS

We claim:

1. A wheel support leveler assembly for vehicles to lift, support and restrain a position of a wheel of said vehicle in a first direction, said assembly comprising:
 - a first planar body with upper and lower surfaces circumscribed by edges, pins upwardly extending from spaced locations on said first planar body upper surface, each of said pins having a circumferential surface, and said first planar body having pin-engaging pockets of contours to matably receive corresponding pins of other similar first planar bodies formed in appropriate locations in said lower surface of said first planar body, said pins being slightly smaller than corresponding pockets of other said first planar bodies so as to provide limited lateral movement between said first planar bodies by means of a loose engagement between certain of said pins of one first planar body and certain of said pockets of another first planar body wherein a clearance is provided about the entire circumferential surface of each said pin between said pin and said corresponding pocket, thereby preventing an interference fit at any portion of said circumferential surface of said pin and said corresponding pocket; and
 - a second body circumscribed by edges, said second body having a first lower surface with a pin engaging pocket to receive at least a pin of said first planar body, and said second body having an upper surface with an obstruction to restrain movement of said vehicle wheel in said first direction.
2. An assembly as described in claim 1, wherein said obstruction is adjacent an extreme end of said second body.
3. An assembly as described in claim 1 wherein said obstruction is a ramp surface.
4. An assembly as described in claim 3 wherein said obstruction ramp surface has a curvilinear shape.
5. An assembly as described in claim 4 wherein said ramp curvilinear shape defines a non-constant radius of curvature.

6. An assembly as described in claim 4 wherein said ramp curvilinear shape defines a declining radius of curvature.
7. An assembly as described in claim 4 wherein said ramp shape defines an increasing radius of curvature.
8. An assembly as described in claim 1 wherein said second body has a heel portion lateral of said first body.
9. An assembly as described in claim 8 wherein said second body heel portion has pin engaging pockets on a lower surface.
10. An assembly as described in claim 1 wherein said second body has a generally planar portion which extends over at least a pin of said first body and a ramp obstruction continuously joined thereto.
11. An assembly as described in claim 10 wherein said planar portion has a top surface at a level adjacent to a top surface of a pin of said first planar portion which extends therethrough.
12. An assembly as described in claim 1 wherein said second body additionally has at least a first pin extending from a top surface thereof.
13. An assembly as described in claim 1 wherein said second body has a pocket formed by an aperture continuously formed therethrough.
14. An assembly according to claim 1 wherein said second body has approximately the same length as said first planar body.
15. An assembly as described in claim 1 wherein said second body has a length approximately 50% greater than the length of said first planar body.
16. An assembly according to claim 1 wherein said pins of said first body are of similar shape and size.

17. An assembly according to claim 1 wherein said pockets of said first planar body are disposed directly beneath corresponding pins and extend into said pins.

18. An assembly according to claim 1 wherein said pins and pockets of said first planar body are arranged so that if a pair of first planar bodies are horizontally aligned adjacent to each other, said pins of adjacent, horizontally-aligned first planar bodies will engage in corresponding pockets of a second body resting thereon.

19. An assembly according to claim 1 wherein said upper and lower surfaces of said first planar body are of square configuration.

20. An assembly according to claim 1 wherein said pins and pockets of said first planar body are aligned in rows parallel to the edges of the unit, each pin being located from its adjacent pins at a distance twice that between that pin and its adjacent edges.

21. An assembly according to claim 1 wherein said pins are of truncated conical shape.

22. An assembly according to claim 1 wherein said pins are of a polygonal shape.

23. An assembly according to claim 1 wherein said planar first body has sixteen generally square pins.

24. An assembly according to claim 22 wherein said pins along a circumferential surface thereof adjacent to adjoining pins have a quarter-circular depression formed thereon.

25. An assembly according to claim 1 wherein said pins of said first planar body and said upper surface of said first body form a continuous barrier.

26. A vehicle wheel positional restraint used in a wheel support leveler assembly, the assembly including a first planar body of upper and lower surfaces

with pins extending from spaced locations on said first planar body upper surface;
said positioned restraint comprising:

5 a positional restraint body circumscribed by edges, said restraint body having a lower surface with pin engaging pockets to receive pins of a first planar body, in a non-interfering manner; and

 an obstruction on an upper surface of said restraint body, said obstruction to prevent movement of said vehicle in a first given direction.

27. A vehicle wheel positional restraint as described in claim 26 wherein said obstruction is shaped as a ramp.

28. A vehicle wheel positional restraint as described in claim 27 wherein said ramp has a curvilinear shape.

29. A vehicle wheel positional restraint as described in claim 28 wherein said ramp curvilinear shape has a non-constant radius of curvature.

30. A vehicle wheel positional restraint as described in claim 26 having a heel for positioning adjacent to a first planar body.

31. A vehicle wheel positional restraint as described in claim 30 wherein said heel has pin receiving pockets formed therein.

32. A vehicle wheel positional restraint as described in claim 26 having a top surface with a generally planar portion for extending over a first planar body and additionally having a ramp obstruction continuously joined to said planar portion.

33. A vehicle wheel positional restraint as described in claim 26 having pockets for receiving an octagonal pin of a first planar body.

34. A vehicle wheel positional restraint as described in claim 26 wherein said positional restraint has pockets for receiving generally square pins of a first planar body.

35. A method of supporting, leveling, and restraining a position of a vehicle wheel in a first direction comprising:

placing on a surface a first planar body with upper and lower surfaces circumscribed by edges, pins upwardly extending from spaced locations on said first planar body upper surface, each of said pins having a circumferential surface, and
5 said first planar body having pin engaging pockets of squares to receive corresponding pins of other similar first planar bodies formed in appropriate locations in said lower surfaces of said first planar body, said pins being slightly smaller than corresponding pockets of other said first planar bodies so as to provide linear lateral
10 movement between said first planar bodies by means of a loose engagement between certain of said pins of one first planar body and certain of said pockets of another first planar body wherein a clearance is provided about the entire circumferential surface of each said pin between said pin and said corresponding pocket, thereby preventing an interference of any portion of said circumferential
15 surface of said pin and said corresponding pocket; and

mating a said pin of said first planar body into a corresponding pocket of a vehicle wheel positional restraint, said vehicle wheel positional restraint having a lower surface with a pin engaging pocket to receive a pin of said first planar body in a non-interfering manner, said vehicle wheel positional restraint having an obstruction
20 on an upper surface to prevent movement of said vehicle in a first given direction; and

positioning said vehicle wheel to a position wherein said vehicle wheel is adjacent to said obstruction.

36. A method as described in claim 35 further comprising placing a vehicle wheel positional restraint with at least two pockets on pins of two underlying first planar bodies.

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37. A method as described in claim 36 wherein said positional restraint has a heel to receive pockets of a first planar body at a different vertical level than said pockets received of another planar body.